

P200301025DK SEQ listing.ST25
SEQUENCE LISTING

<110> Copenhagen University Tech Trans Enheden
Mundy, John

<120> Plant disease resistance and SAR regulator protein

<130> P200301025

<160> 28

<170> PatentIn version 3.2

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 85 90 95

Val Phe Leu Glu Ser Gly Gly Gly Gly Asp Val Ser Pro Ala Ala Arg
 100 105 110

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 115 120 125

Ala Arg Asp Glu Thr Val Glu Ile Asn Thr Ala Met Glu Glu Ala Ala
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P200301025DK SEQ listing.ST25

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 35 40 45

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Gln Glu Pro Ser Gln Ser Arg Pro Pro Pro Gly Pro Val Ile Ile Tyr
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Thr Val Ser Pro Arg Ile Ile His Thr His Pro Asn Asn Phe Met Thr
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Leu Val Gln Arg Leu Thr Gly Lys Thr Ser Thr Ser Thr Thr Ser Ser
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Ser Tyr Ser Ser Ser Thr Ser Ala Pro Lys Asp Ala Ser Thr Met Val
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Asp Thr Ser His Gly Leu Ile Ser Pro Ala Ala Arg Phe Ala Val Thr
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Glu Lys Ala Asn Ile Ser Asn Glu Leu Gly Thr Phe Val Gly Gly Glu
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Leu Tyr Ala 60	Arg Glu 65	Val Val Ile 70	
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Val Val His 80	Thr Thr Ala 85	Met Asn Val 90	
acc ggc atc tca tcc gcc gtc ttc ctc gaa tcc ggt aac ggc gga gat			459
Thr Gly Ile 95	Ser Ser Ala 100	Leu Glu Ser 105	
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Ala Thr Ala 140	Met Glu Glu 145	Ala Ala Glu 150	
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 85 90 95

Ala Val Phe Leu Glu Ser Gly Asn Gly Gly Asp Val Ser Pro Ala Ala
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Val Met Ala Ala Lys Asp Glu Thr Val Glu Ile Ala Thr Ala Met Glu
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Pro Ala Met Leu Pro Thr Ala Ser Ala Gly Ile Phe Ser Gln Met Thr
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Thr His Gln Gly Gly Met Phe Ser Pro Gly Leu Phe Ser Pro Ala Gly
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 85 90 95

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 115 120 125

Pro Val Glu Ser Ser Thr Ala Met Glu Glu Ala Ala Glu Phe Gly Cys
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 145 150 155 160

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 165 170 175

Pro Ala Leu Pro Pro Gly Leu Phe Ser Pro Ala Gly Leu Met Ser Pro
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 Gln Pro Pro Pro Arg Gln Pro Ile Ile Ile Tyr Thr Val Ser Pro Lys
 35 40 45
 gtg att cac acc acc cca agt gac ttc atg aac ctc gtc caa cgc ctc 192
 Val Ile His Thr Thr Pro Ser Asp Phe Met Asn Leu Val Gln Arg Leu
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 35 40 45
 Val Ile His Thr Thr Pro Ser Asp Phe Met Asn Leu Val Gln Arg Leu
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P200301025DK SEQ listing.ST25

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Asn Asn Thr Thr His Val Asp Pro Phe Asn Asn Gly Gly Gly Gly Met
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96

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144

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Lys Lys Pro Ser Ser Gly Ala Ala Ala Ala Ala Ala Ala Gln Ala
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192

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Asp	Ala	Ser	Pro	Lys	Ile	Ile	His	Ala	Lys	Pro	Asn	Glu	Phe	Met	Ala	
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ctc	gtg	cag	cgg	ctc	acc	ggc	ccg	ggg	tcg	ggg	ccg	ccg	gcg	ccg	ccg	336
Leu	Val	Gln	Arg	Leu	Thr	Gly	Pro	Gly	Ser	Gly	Pro	Pro	Ala	Pro	Pro	
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His	Gln	Gly	Glu	Ala	Gln	Ala	Gln	Asp	Tyr	Pro	Met	Met	Asp	Glu	Ala	
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gcc	gcg	cag	cag	ttc	ttc	ccg	ccg	gag	ctg	ctg	ctc	tcg	ccg	tcg	gcc	432
Ala	Ala	Gln	Gln	Phe	Phe	Pro	Pro	Glu	Leu	Leu	Leu	Ser	Pro	Ser	Ala	
				130					135					140		
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Pro	Met	Pro	Glu	Pro	Ala	Pro	Glu	Tyr	Val	Asp	Ile	Thr	Asn	Gly	Gly	
		160				165					170					
ggc	ggc	ggc	ggg	gtc	gac	gac	ggc	ggc	ctc	gcg	gcg	atc	ctc	ggc	tcg	576
Gly	Gly	Gly	Gly	Val	Asp	Asp	Gly	Gly	Leu	Ala	Ala	Ile	Leu	Gly	Ser	
				175		180				185					190	
atc	cg	cca	ggc	atc	ctc	tcc	ccg	ctc	ccc	tcc	tcc	ctc	ccg	ccc	gcc	624
Ile	Arg	Pro	Gly	Ile	Leu	Ser	Pro	Leu	Pro	Ser	Ser	Leu	Pro	Pro	Ala	
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gcc	gtc	ccc	ggc	cag	ttc	tcg	ccg	ctc	ccg	ttc	gac	gcg	agg	ccg	ctc	672
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		225				230						235				
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Gly	Ser	Gly	Gly	Asn	Thr	Ser	Asn	Gly	Gly	Gly	Ala	Arg	Pro	Pro	Pro	
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Ser	Tyr	Tyr	Ala	Asp	Pro	Phe	Val	Pro	Ser	Pro	Arg	His	Leu	Leu	Ala	
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Thr	Pro	Thr	Val	Pro	Ser	Pro	Ala	Thr	Cys	Ala	Glu	Leu	Phe	Ser	Asn	
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P200301025DK SEQ listing.ST25

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 35 40 45

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 50 55 60

Glu Gln Gln Gln Pro Pro Pro Arg Ala Pro Val Ile Ile Tyr Asp Ala
 65 70 75 80

Ser Pro Lys Ile Ile His Ala Lys Pro Asn Glu Phe Met Ala Leu Val
 85 90 95

Gln Arg Leu Thr Gly Pro Gly Ser Gly Pro Pro Ala Pro Pro His Gln
 100 105 110

Gly Glu Ala Gln Ala Gln Asp Tyr Pro Met Met Asp Glu Ala Ala Ala
 115 120 125

Gln Gln Phe Phe Pro Pro Glu Leu Leu Leu Ser Pro Ser Ala Ala Met
 130 135 140

Ser Pro Ala Ala Arg Leu Ala Thr Ile Glu Arg Ser Val Arg Pro Met
 145 150 155 160

Pro Glu Pro Ala Pro Glu Tyr Val Asp Ile Thr Asn Gly Gly Gly Gly
 165 170 175

Gly Gly Val Asp Asp Gly Gly Leu Ala Ala Ile Leu Gly Ser Ile Arg
 180 185 190

Pro Gly Ile Leu Ser Pro Leu Pro Ser Ser Leu Pro Pro Ala Ala Val
 195 200 205

Pro Gly Gln Phe Ser Pro Leu Pro Phe Asp Ala Arg Pro Leu Pro Phe
 210 215 220

Asp Ala Ser Cys Ile Ser Trp Leu Asn Glu Leu Ser Pro Ile Leu Arg
 225 230 235 240

Ala Ala Ser Ala Gly Ala Ala Ser Ser Gly Ser Gly Gly Gly Gly Ser
 245 250 255

Gly Gly Asn Thr Ser Asn Gly Gly Gly Ala Arg Pro Pro Pro Ser Tyr

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260

265

270

Tyr Ala Asp Pro Phe Val Pro Ser Pro Arg His Leu Leu Ala Thr Pro
 275 280 285

Thr Val Pro Ser Pro Ala Thr Cys Ala Glu Leu Phe Ser Asn Leu Pro
 290 295 300

Asp Leu
 305

<210> 21
 <211> 16
 <212> DNA
 <213> Oryza sp.

<400> 21
 atggaattcc cgctcgt 16

<210> 22
 <211> 19
 <212> DNA
 <213> Oryza sp.

<400> 22
 ctagagatcc ggcaggttg 19

<210> 23
 <211> 781
 <212> DNA
 <213> CaMV 35S promoter duplicated

<400> 23
 atggtggagc acgacactct cgtctactcc aagaatatca aagatacagt ctcagaagac 60
 caaagggcta ttgagacttt tcaacaaagg gtaatatcgg gaaacctcct cggattccat 120
 tgcccagcta tctgtcactt catcaaaagg acagtagaaa aggaaggtgg cacctacaaa 180
 tgccatcatt gcgataaagg aaaggctatc gttcaagatg cctctgccga cagtgggtccc 240
 aaagatggac cccacccac gaggagcatc gtggaaaaag aagacgttcc aaccacgtct 300
 tcaaagcaag tggattgatg tgataacatg gtggagcacg acactctcgt ctactccaag 360
 aatatcaaag atacagtctc agaagaccaa agggctattg agacttttca acaaagggtg 420
 atatcgggaa acctcctcgg attccattgc ccagctatct gtcaattcat caaaaggaca 480
 gtagaaaagg aaggtggcac ctacaaatgc catcattgcg ataaaggaaa ggctatcgtt 540
 caagatgcct ctgccgacag tgggtccaaa gatggacccc caccacgag gagcatcgtg 600
 gaaaaagaag acgttccaac cagctcttca aagcaagtgg attgatgtga tatctccact 660
 gacgtaaggg atgacgcaca atcccactat ccttcgcaag accttcctct atataaggaa 720
 gttcatttca tttggagagg acacgctgaa atcaccagtc tctctctaca aatctatctc 780
 t 781

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<210> 24
 <211> 253
 <212> DNA
 <213> Agrobacterium NOS terminator

<400> 24
 cgttcaaaca tttggcaata aagtttctta agattgaatc ctgttgccgg tcttgcgatg 60
 attatcatat aatttctggt gaattacggt aagcatgtaa taattaacat gtaatgcatg 120
 acgttatatta tgagatgggt ttttatgatt agagtccgcg aattatacat ttaatacgcg 180
 atagaaaaca aaatatagcg cgcaaactag gataaattat cgcgcgcggt gtcattctatg 240
 ttactagatc ggg 253

<210> 25
 <211> 189
 <212> DNA
 <213> Synthetic intron

<400> 25
 gtaagtttct gcttctacct ttgatataata tataataatt .atcattaatt agtagtaata 60
 taatattttca aatatttttt tcaaaataaa agaatgtagt atatagcaat tgcttttctg 120
 tagtttataa gtgtgtatat tttaatttat aacttttcta atatatgacc aaaatttgtt 180
 gatgtgcag 189

<210> 26
 <211> 207
 <212> PRT
 <213> Oryza sp.

<400> 26

Met Glu Gln Gln Leu Ser Ser Pro Ser Ala Ser Gln Arg Gly Gly Gly
 1 5 10 15

Arg Glu Leu Gln Gly Pro Arg Pro Ala Pro Leu Lys Val Arg Lys Glu
 20 25 30

Ser His Lys Ile Arg Lys Gln Glu Pro Val Gln Gln Leu Arg Gln Pro
 35 40 45

Val Ile Ile Tyr Thr Met Ser Pro Lys Val Val His Ala Asn Ala Ala
 50 55 60

Asp Phe Met Ser Val Val Gln Arg Leu Thr Gly Ala Pro Pro Thr Ala
 65 70 75 80

Pro Pro Gln Pro Gln Pro His His Pro Thr Leu Leu Ala Gln Met Pro
 85 90 95

Pro Gln Pro Ser Phe Pro Phe His Leu Gln Gln Gln Asp Ala Trp Pro
 100 105 110

Gln Gln Gln His Ser Pro Ala Ala Ile Glu Gln Ala Ala Ala Arg Ser

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115

120

125

Ser Gly Ala Asp Leu Pro Pro Leu Pro Ser Ile Leu Ser Pro Val Pro
 130 135 140

Gly Thr Val Leu Pro Ala Ile Pro Ala Ser Phe Phe Ser Pro Pro Ser
 145 150 155 160

Leu Ile Ser Pro Val Pro Phe Leu Gly Ala Thr Thr Thr Ser Ser Ala
 165 170 175

Ala Pro Ser Thr Ser Pro Ser Pro Met Gly Gly Ser Ala Tyr Tyr Trp
 180 185 190

Asp Leu Phe Asn Met Gln Gln Gln Gln His Tyr His His Gln Asn
 195 200 205

<210> 27
 <211> 238
 <212> PRT
 <213> Zea mays

<400> 27

Met Asp Pro Pro Ser Ser Ser Gly Arg Pro Thr Thr Pro Arg Arg Gln
 1 5 10 15

Leu Gln Gly Pro Arg Pro Pro Arg Leu Asn Val Arg Met Glu Ser His
 20 25 30

Ala Ile Lys Lys Pro Ser Ala Ser Gly Ala Pro Pro Ala Pro Gly Gln
 35 40 45

Gly Arg Pro Arg Asp His His His His His Pro Gln Pro Gly Arg Ala
 50 55 60

Pro Val Ile Ile Tyr Asp Ala Ser Pro Lys Val Ile His Ala Lys Pro
 65 70 75 80

Ser Glu Phe Met Ala Leu Val Gln Arg Leu Thr Gly Pro Gly Ala Gln
 85 90 95

Ala Gln His Glu Arg His Val Ala Asp Asp Asp Ala Thr Ala Asn Gly
 100 105 110

Gly Gly Val Leu Gly Gln Ala Phe Leu Pro Pro Glu Leu Leu Leu Ser
 115 120 125

Pro Ser Ala Ala Met Ser Pro Ala Ala Arg Leu Ala Thr Ile Glu Arg
 130 135 140

Ser Val Arg Pro Val Pro Ala Pro Ala Pro Ala Pro Asp Tyr Ala Ala
 145 150 155 160

Asp Gly His Pro Arg Gly Gly Ala Arg Pro Arg Glu Ala Pro Arg His
165 170 175

Pro Val Pro Ala Ala Val Leu Ala Ala Ala Gly Arg Arg Val Gly Pro
180 185 190

Val Leu Ala Ala Ala Leu Arg Pro Gln Gln Arg Gln Leu Ala Gln Arg
195 200 205

Ala Gln Pro His Pro Pro Gly Ser Val His Gly Gln Arg Ser Ala Pro
210 215 220

Leu Ala His Ala His Gly Pro Thr Gly Gly Ser Arg Gln Pro
225 230 235

<210>	28
<211>	271
<212>	PRT
<213>	Zea mays

<400> 28

Gln Gly Pro Arg Pro Pro Arg Leu Ala Val Ser Lys Asp Ser His Lys
1 5 10 15

Val Arg Lys Pro Pro Val Ala Pro Gln Arg Gln Gln His Gln His Gln
20 25 30

Gln Pro Ala Ala Gln Leu Gln Gln Gln His Gln Tyr His Gln Gln
35 40 45

Gln Gln Gln Gln Gly Arg Gln Pro Val Ile Ile Tyr Asp Ala Ser Pro
50 55 60

Lys Val Ile His Thr Lys Pro Gly Asp Phe Met Ala Leu Val Gln Arg
65 70 75 80

Leu Thr Gly Pro Gly Ser Thr Ser Gln Ala Gln Phe Asp Ala Ala Ala
85 90 95

Ala Ala Ala Gly Pro Ser His Pro Ala Ala Met Glu Phe Glu Pro Arg
100 105 110

Glu Phe Leu Leu Ser Pro Thr Ala Ala Leu Ser Pro Ala Ala Arg Leu
115 120 125

Ala Ala Ile Glu Arg Ser Val Arg Pro Leu Pro Pro His His Ala Pro
130 135 140

Ala Ala Val Pro Pro Tyr Phe Gly Ala Thr Asn Asp Asp Gly Phe Phe
145 150 155 160

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Leu Pro Gly Ser Ala Asp Met Asp Ser Leu Ser Ala Ala Leu Gly Pro
165 170 175

Pro Ala Gly Arg Pro Gly Ile Leu Ser Pro Ala Ala Leu Pro Pro Ala
180 185 190

Ala Ser Thr Gly Leu Phe Ser Pro Met Pro Phe Asp Pro Ser Cys Leu
195 200 205

Ser Trp Leu Ser Glu Leu Ser Pro Phe Leu Pro Ser Ala Gly Thr Arg
210 215 220

Ala Ala Ala Ala Gly Leu Leu Asp Gln Ala Pro Phe Ala Pro Ser Pro
225 230 235 240

Arg Ser Ser Leu Leu Leu Ser Thr Pro Thr Met Pro Ser Pro Ala Thr
245 250 255

Phe Ser Val Leu Glu Phe Phe Ser Ser Pro Asn Phe Pro Asp Leu
260 265 270